

Proposed Item for Biobased Designation

The following biobased product information has been collected to support item designation by USDA for the BioPreferred Program. This summary reflects data available as of January 29, 2008.

Title: Oven and Grill Cleaners

Description: Liquid or gel cleaning agents used on high temperature cooking surfaces such as barbeques, smokers, grills, stoves, and ovens to soften and loosen charred food, grease, and residue.

Companies Supplying Item: 11 companies supplying Oven and Grill Cleaners have been identified through internet searches, manufacturer's directories, trade associations, and company submissions.

Industry Associations Investigated: The following industry associations have been investigated for member companies supplying Oven and Grill Cleaners:

- United Soybeans Association
- National Corn Growers Association
- Organic Trade Association
- The Association of Approved Oven Cleaners

Commercially Available Products Identified: Of the companies identified, 13 Oven and Grill Cleaners are commercially available on the market.

Product Information Collected: Specific product information including company contact, intended use, biobased content, and performance characteristics have been collected on 9 Oven and Grill Cleaners.

Industry Performance Standards: Product information submitted by biobased manufacturers and suppliers indicate that have typically been tested to the following industry standards:

- None Found

Samples Tested for Biobased Content: 4 samples of Oven and Grill Cleaners have been submitted to independent laboratories for biobased content testing as specified by ASTM standard D6866-04.

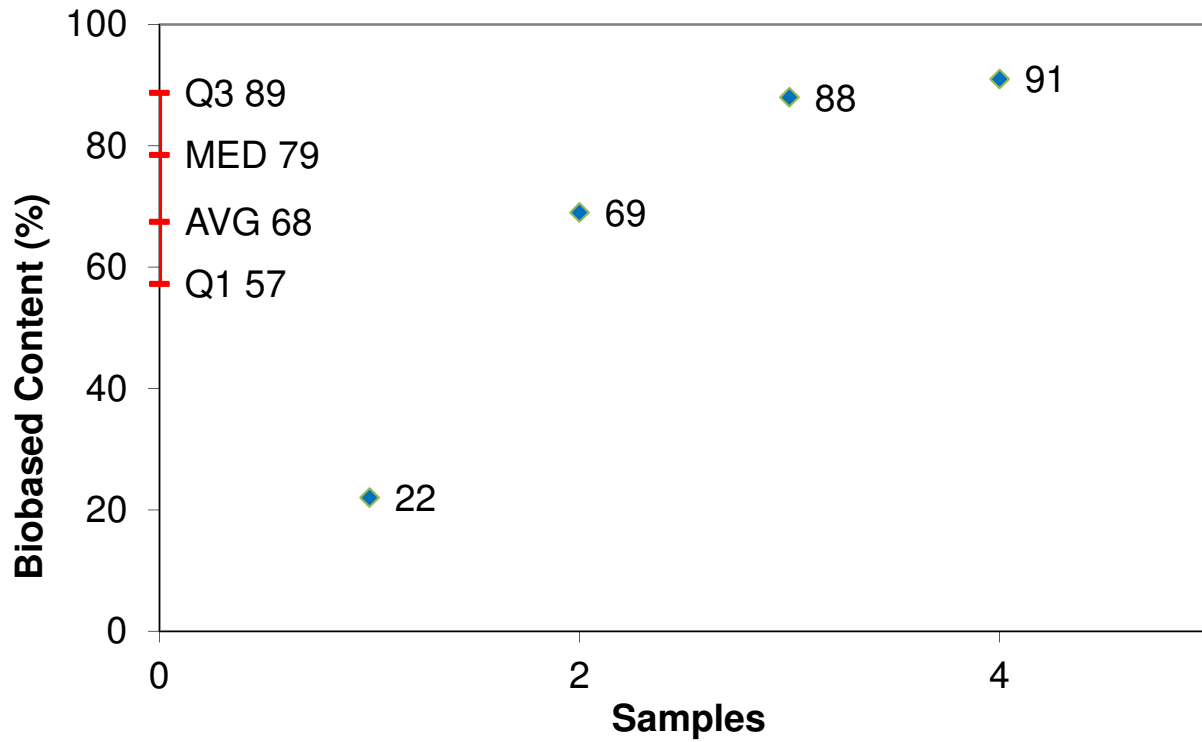
Biobased Content Data: Results from biobased content testing of Oven and Grill Cleaners indicate a range of content percentages from 22% minimum to 91% maximum biobased content as defined by ASTM D 6866-04. A detailed distribution of biobased content levels is included as Appendix A.

Products Submitted for BEES Analysis: Life-cycle cost and environmental effect data for 3 Oven and Grill Cleaners have been submitted to NIST for BEES analysis.

BEES Analysis: The life-cycle costs of the submitted Oven and Grill Cleaners range from \$0.26 minimum to \$10.60 maximum per usage unit. The environmental scores range from 0.0005 minimum to 0.0156 maximum. A detailed summary of the BEES results is included as Appendix B.

Appendix A - Biobased Content Data

Oven and Grill Cleaners

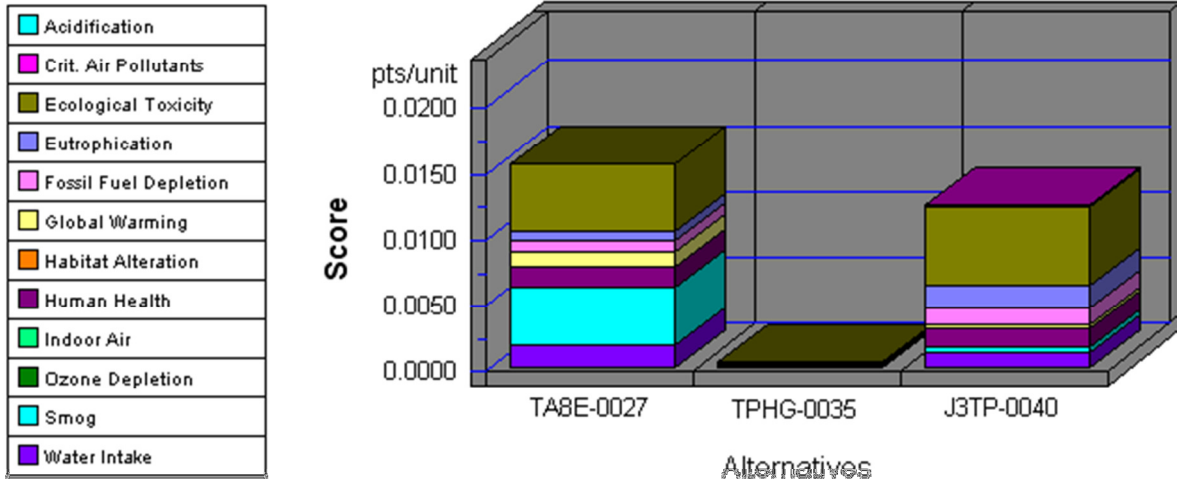


	Company	Product	C14	BEES
1	U28U	U28U-0005	22	
2	TA8E	TA8E-0027	69	Yes
3	TPHG	TPHG-0035	88	Yes
4	J3TP	J3TP-0040	91	Yes

Appendix B - BEES Analysis Results

Functional Unit: 1 gallon

Environmental Performance

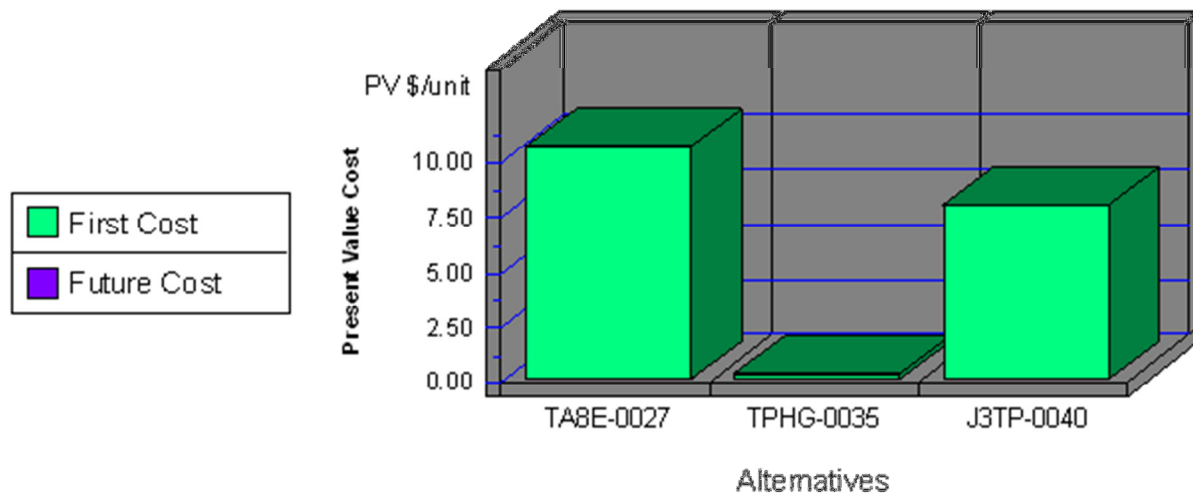


Note: Lower values are better

Category	TA8E-0027	TPHG-0035	J3TP-0040
Acidification--3%	0.0000	0.0000	0.0000
Crit. Air Pollutants--9%	0.0001	0.0000	0.0001
Ecolog. Toxicity--7%	0.0051	0.0002	0.0060
Eutrophication--8%	0.0007	0.0000	0.0017
Fossil Fuel Depl.--10%	0.0008	0.0000	0.0019
Global Warming--29%	0.0011	0.0001	0.0002
Habitat Alteration--6%	0.0000	0.0000	0.0000
Human Health--13%	0.0017	0.0001	0.0015
Indoor Air--3%	0.0000	0.0000	0.0000
Ozone Depletion--2%	0.0000	0.0000	0.0000
Smog--4%	0.0043	0.0000	0.0004
Water Intake--8%	0.0018	0.0001	0.0012
Sum	0.0156	0.0005	0.0124

Oven and Grill Cleaners				
Impacts	Units	TA8E-0027	TPHG-0035	J3TP-0040
Acidification	millimoles H ⁺ equivalents	9.53E+02	3.80E+01	8.15E+02
Criteria Air Polutants	microDALYs	2.27E-01	9.93E-03	2.06E-01
Ecotoxicity	g 2,4-D equivalents	5.90E+01	1.82E+00	7.00E+01
Eutrophication	g N equivalents	2.31E+00	1.12E-01	5.56E+00
Fossil Fuel Depletion	MJ surplus energy	2.95E+00	1.76E-01	4.68E+00
Global Warming	g CO ₂ equivalents	9.40E+02	5.03E+01	2.04E+02
Habitat Alteration	T&E count	0.00E+00	0.00E+00	0.00E+00
Human Health--Cancer	g C ₆ H ₆ equivalents	1.09E+00	7.22E-02	9.77E-01
Human Health--NonCancer	g C ₇ H ₈ equivalents	2.15E+03	4.38E+01	1.22E+03
Indoor Air Quality	g TVOCs	0.00E+00	0.00E+00	0.00E+00
Ozone Depletion	g CFC-11 equivalents	1.49E-06	1.23E-06	3.89E-05
Smog	g NO _x equivalents	1.62E+02	5.37E-01	1.39E+01
Water Intake	liters of water	1.21E+02	6.03E+00	7.77E+01
Functional Unit	-----	1 gallon, as used		
1 Following are more complete descriptions of units: Acidification: millimoles of hydrogen ion equivalents; Criteria Air Pollutants: micro Disability-Adjusted Life Years; Ecological Toxicity: grams of 2,4-dichlorophenoxy-acetic acid equivalents; Eutrophication: grams of nitrogen equivalents; Fossil Fuel Depletion: megajoules of surplus energy; Global Warming: grams of carbon dioxide equivalents; Habitat Alteration: threatened and endangered species count;Human Health-Cancer: grams of benzene equivalents; Human Health-NonCancer: grams of toluene equivalents; Indoor Air Quality: grams of Total Volatile Organic Compounds; Ozone Depletion: grams of chloroflourocarbon-11 equivalents; Smog: grams of nitrogen oxide equivalents; and Water Intake: liters of water.				

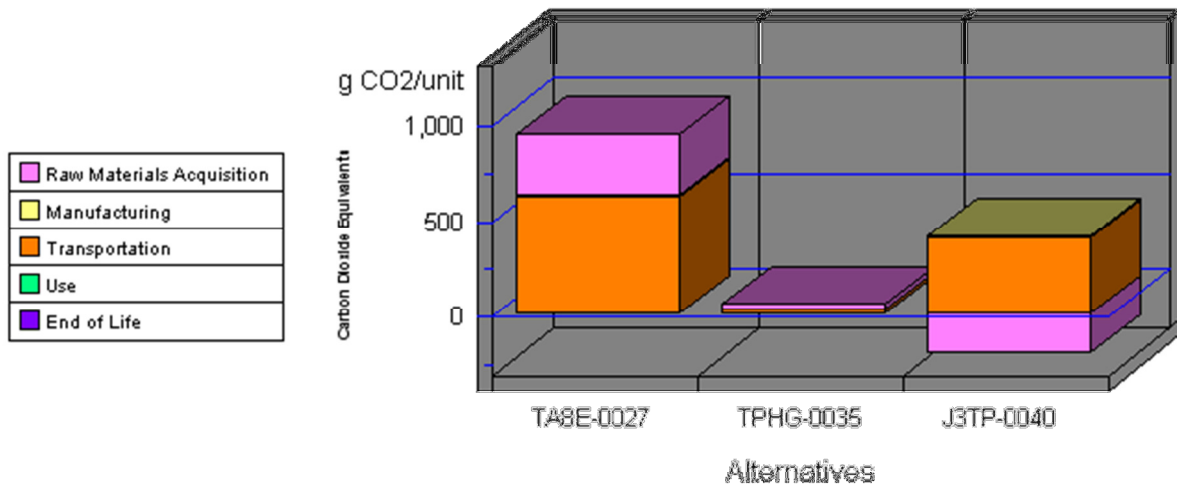
Economic Performance



Category	TA8E-0027	TPHG-0035	J3TP-0040
First Cost	10.60	0.26	7.98
Future Cost- 3.0%	0.00	0.00	0.00
Sum	10.60	0.26	7.98

*This is a consumable product. Therefore, future costs are not calculated.

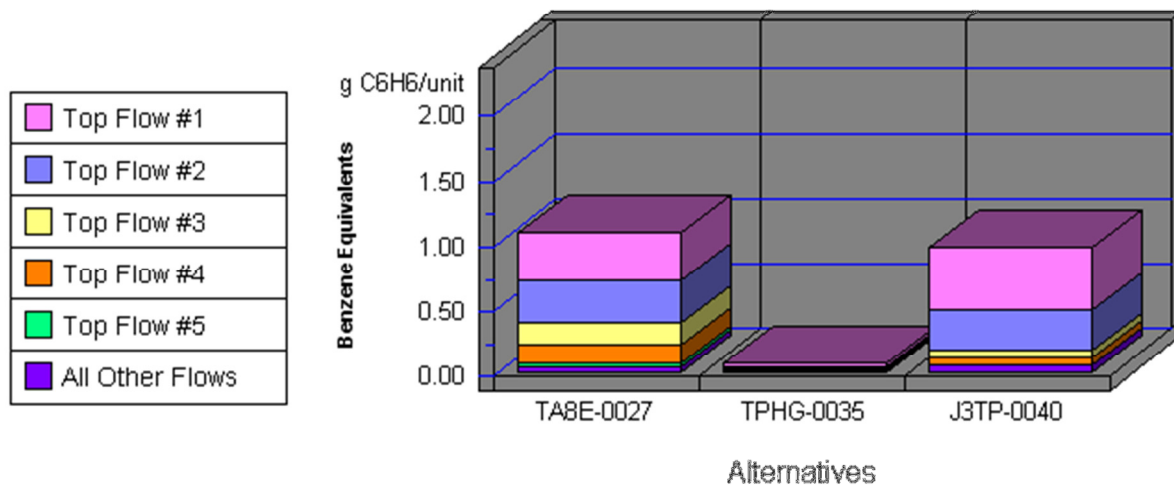
Global Warming by Life-Cycle Stage



Note: Lower values are better

Category	TABE-0027	TPHG-0035	J3TP-0040
1. Raw Materials	319	30	-201
2. Manufacturing	8	4	4
3. Transportation	613	17	401
4. Use	0	0	0
5. End of Life	0	0	0
Sum	940	50	204

Human Health Cancer by Sorted Flows*

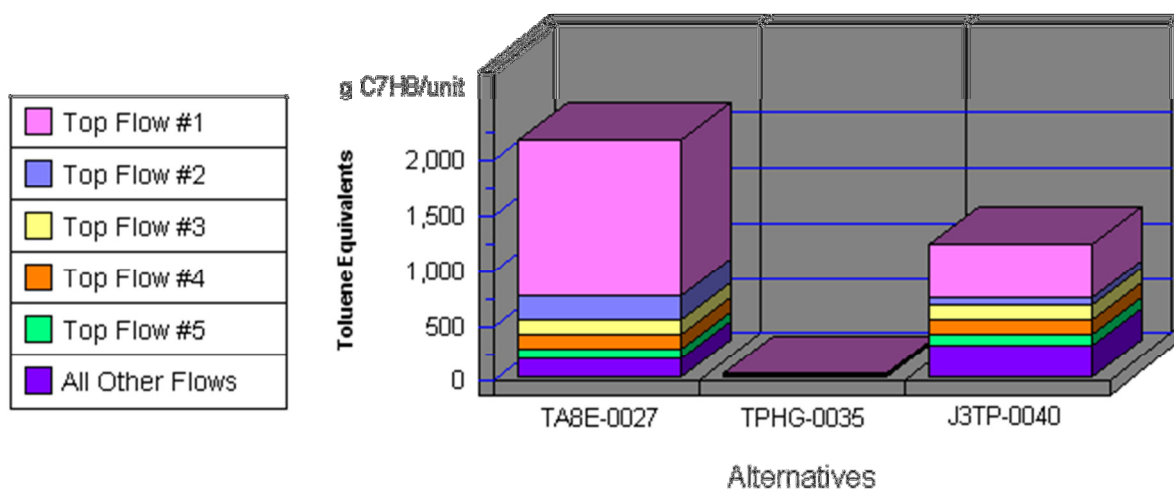


Note: Lower values are better

Category	TA8E-0027	TPHG-0035	J3TP-0040
Cancer--(w) Arsenic (As3+, As5+	0.37	0.02	0.48
Cancer--(w) Phenol (C6H5OH)	0.34	0.02	0.32
Cancer--(a) Dioxins (unspecific	0.16	0.00	0.05
Cancer--(a) Arsenic (As)	0.14	0.00	0.05
Cancer--(a) Atrazine (C8H14ClN5	0.04	0.00	0.00
All Others	0.04	0.02	0.07
Sum	1.09	0.07	0.98

*Sorted by five topmost flows for worst-scoring product

Human Health Noncancer by Sorted Flows*



Note: Lower values are better

Category	TA8E-0027	TPHG-0035	J3TP-0040
Noncancer--(a) Mercury (Hg)	1,410.80	15.06	480.00
Noncancer--(a) Dioxins (unspeci	206.25	3.79	66.48
Noncancer--(a) Lead (Pb)	139.23	4.31	148.85
Noncancer--(w) Barium (Ba++)	135.91	6.28	122.93
Noncancer--(w) Lead (Pb++, Pb4+	77.46	4.28	98.46
All Others	180.99	10.05	300.38
Sum	2,150.63	43.76	1,217.09

*Sorted by five topmost flows for worst-scoring product